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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/950,081	09/12/2001	Hiroya Okumura	2001-1255A	1556

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WASHINGTON, DC 20006-1021

EXAMINER

RUTHKOSKY, MARK

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/950,081

Applicant(s)

OKUMURA ET AL.

Examiner

Mark Ruthkosky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

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DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed 11/8/2001 has been placed in the application file, and the information referred to therein has been considered as to the merits.

Drawings

No drawings have been filed with the application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Butler (US 6,251,308.)

The instant claims are to a resin composition for a separator of a fuel cell, which comprises an electroconductive agent and a radical-polymerizable thermosetting resin system.

Butler (US 6,251,308) teaches a resin composition for a separator of a fuel cell comprising an electroconductive agent and a radical-polymerizable thermosetting resin system (see column 4.) The electroconductive agent includes carbonaceous materials such as graphite in various concentrations (lines 37-65.) The radical-polymerizable thermosetting resin system includes a vinyl-ester series resin in which methacrylate is added to a bisphenol A resin (lines 15-40.) A radical-polymerizable dilutant of styrene is added in a specific range (lines 25-40.) The double bond equivalent and glass transition temperature of the composition are inherent features of the compound. Low-profile agents are noted throughout the reference (including the various compounds in columns 5 and 6.) The agents are added in the range of 0.1 to 30 parts (wt.) relative to the radical-polymerizable thermosetting resin system. An example includes polyvinyl acetate (col. 6, lines 37-end.) Molding and mixing the materials are noted in col. 6, line 60 to col. 7. Thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butler (US 6,251,308.)

Butler (US 6,251,308) teaches a resin composition for a separator of a fuel cell comprising an electroconductive agent and a radical-polymerizable thermosetting resin system (see column 4.) The electroconductive agent includes carbonaceous materials such as graphite in various concentrations (lines 37-65.) The radical-polymerizable thermosetting resin system includes a vinyl-ester series resin in which methacrylate is added to a bisphenol A resin (lines 15-40.) A radical-polymerizable dilutant of styrene is added in a specific range (lines 25-40.) The double bond equivalent and glass transition temperature of the composition are inherent features of the compound. Low-profile agents are noted throughout the reference (including the various compounds in columns 5 and 6.) The agents are added in the range of 0.1 to 30 parts (wt.) relative to the radical-polymerizable thermosetting resin system. An example includes polyvinyl acetate (col. 6, lines 37-end.) Molding and mixing the materials are noted in col. 6, line 60 to col. 7.

Butler (US 6,251,308) does not teach a process wherein the resin composition is kneaded with a pressure kneader and molding the kneaded material or wherein the pressure in the pressure kneader is in the range of 0.1×10^5 to 10×10^5 . Butler teaches that the resin may be "mixed using a variety of mixing conditions including either continuous or batch and using a variety of known mixing equipment." Molding the material is described at various pressures. It would be obvious to one of ordinary skill in the art at the time the invention was made to knead the resin composition with a pressure kneader as pressure kneading equipment is well known in the art and the reference teaches using a commonly known mixing equipment will provide proper

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mixing of the material. The pressure of the mixing will further be obvious to one of ordinary skill in the art as one of ordinary skill in the art would understand the mixing of such materials and would determine the optimum mixing parameters by routine experimentation. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. The artisan would have found the claimed invention to be obvious in light of the teachings of the reference.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art does not read upon the instant claims, however, the references include general teachings and relevant features as to the state of the art at the time of the invention.

Examiner Correspondence

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1193. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 703-305-0587. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:00.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 703-308-2383.

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The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Mark Ruthkosky

Primary Patent Examiner

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Mark Ruthkosky
8/25/03